

Trend Study 1-10-01

Study site name: Kilgore Basin.

Vegetation type: Black Sagebrush.

Compass bearing: frequency baseline 155 degrees magnetic.

Frequency belt placement: line 1 (11 & 95ft), line 2 (59ft), line 3 (34ft), line 4 (71ft).

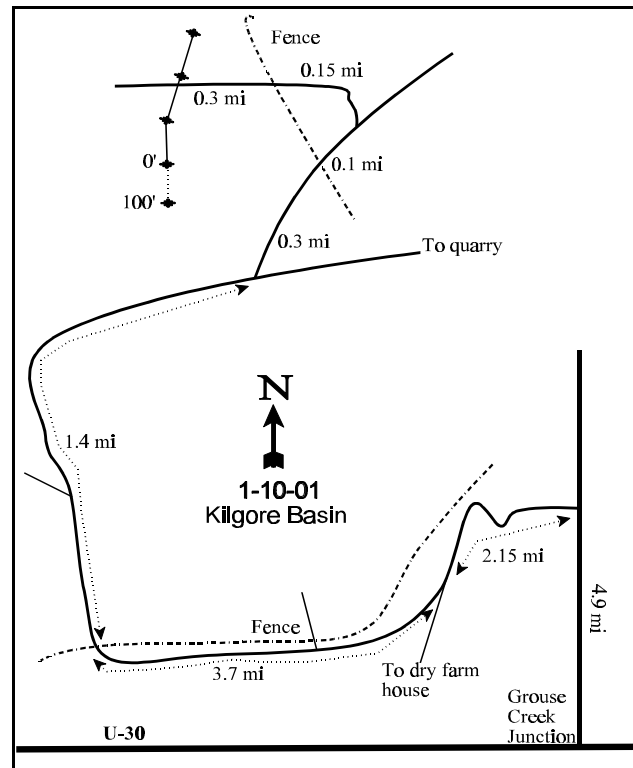
LOCATION DESCRIPTION

From the U-30/Grouse Creek Road junction, proceed north 4.9 miles. Turn left (west) and travel 2.15 miles to a fork that leads to a dry farm. Stay on the main road at this fork (right) and continue 3.7 miles to a gate. Continue 1.4 miles to another fork. Turn left and travel 0.3 miles to a gate. Proceed 0.1 miles to a fork. Turn left here and go 0.15 miles to another gate. Continue 0.3 miles to a witness post on the south side of the road. Walk 36 paces from the witness post at a bearing of 148 degrees magnetic to the 0-foot stake of the frequency baseline. This stake marked by a red browse tag #7910. The baseline bearing is 155 degrees magnetic.



Map Name: Lucin NW

Township 9N, Range 19N, Section 23



Diagrammatic Sketch

UTM 4596520 N, 249668 E

DISCUSSION

Trend Study No. 1-10

The Kilgore Basin study is located west of Grouse Creek. It samples what is considered critical deer winter range. Terrain ranges from nearly level to gentle south facing slopes. Elevation is approximately 5,300 feet. The study lies within a large basin surrounded by low hills that are nearly barren of tree cover. The sampled range type is a uniform, low-growing, evenly spaced stand of black sagebrush. Shrub interspecies are essentially barren of other vegetation. Within the basin, plant diversity is minimal. The bulk of the area is occupied by the black sagebrush type. The only variation is in small swales where the deeper rooted Wyoming and basin big sagebrush predominates along with a few isolated patches of juniper trees. This area is within the Kilgore allotment. It is used by 268 cattle and 30 horses during the winter (11/01 to 04/30). Deer pellet groups were moderately high with a quadrat frequency of 17% in 1996. Some elk sign was also noted. A pellet-group transect read in conjunction with the vegetative transects in 2001 estimated 21 deer days use/acre (51 deer days use/ha) and 5 cow days use/acre (13 cow days use/ha). Some sage grouse droppings were also seen but not hit in the pellet group transect.

Soil is alluvially deposited and has a long history of steady erosion. The soil texture is a sandy clay loam with a moderately alkaline soil reaction (8.1 pH). A limiting factor for the site may be the low amounts of phosphorus (6.3 ppm) where values of less than 10 ppm can limit normal plant growth and development. Effective rooting depth is moderately shallow with an average reading of only about 12 inches. The bulk of the ground surface is occupied by rock and erosion pavement. Apart from shrub crowns there is very little herbaceous cover. Erosion continues at a slow but steady rate in spite of the gentle terrain. Plant pedestalling, exposed plant roots and exposed lichen lines on rocks are all common. Soil erosion, however, has not seriously effected reproduction of black sagebrush, the key browse species. The soil erosion condition was determined as stable in 2001.

Black sagebrush dominates the site with scattered amounts of narrowleaf low rabbitbrush, shadscale saltbush, winterfat, and spiny hopsage. All show evidence of use, although intensity is markedly greater on black sagebrush and winterfat. The population of black sagebrush appears relatively stable, but showed a predominance of decadent plants in 1984 and 1990. Density of black sagebrush was estimated at 15,932 plants/acre in 1984, remaining stable at 15,960 plants/acre in 2001. Utilization was heavy on 93% of the population and percent decadency was relatively high at 47% in 1984. Use has been mostly light to moderate since then and percent decadency has declined to 22% in 2001. The average annual growth rate for this black sagebrush site is below the average for sites measured in this management unit. The percentage of dead within the population has remained stable since 1996, at 6%. There continues to be good numbers of seedlings and young within the population.

The herbaceous understory is sparsely distributed and has poor species diversity. Total herbaceous cover equaled less than 4% cover in 1996 declining to only 2% total cover in 2001. Most are low-growing xeric species with low palatability. The most prominent grasses include bottlebrush squirreltail, Sandberg bluegrass, and Indian ricegrass. Cheatgrass is present but rather infrequent. Forbs include longleaf phlox, milkvetch, and rockcress. Livestock use historically, which has included horses in the past, has had a negative effect on herbaceous density and composition.

1984 APPARENT TREND ASSESSMENT

Nearly all of the indicators used to evaluate soil trend suggest a declining condition. Although, it appears at least superficially that widespread sheet erosion has been occurring for a long time and has not greatly affected the plant community. This is a very dry site with low potential for producing grass or forbs under even the best of conditions. The current plant community appears quite stable. Black sagebrush should continue to dominate the site, even though the population is subject to heavy utilization.

1990 TREND ASSESSMENT

The relatively small statured adult population (excluding seedlings) of black sagebrush on this site is stable. The high percentage of decadence is normal for high density stands like this one. Percent decadency has increased from 47% to 66%. This would be expected with extended drought. Sagebrush canopy cover averages about 21%. These shrubs were severely hedged in the past, but recently there has been lighter utilization and improved growth form. The majority of the mature plants have normal vigor. Nested frequency of bottlebrush squirreltail declined and the other two grasses were not sampled. All forbs except hoods phlox decreased in sum of nested and quadrat frequencies. The majority of the ground cover is rock and pavement, with the current rate of erosion appearing slow.

TREND ASSESSMENT

soil - stable but in poor condition (3)

browse - stable (3)

herbaceous understory - down slightly and depleted (2)

1996 TREND ASSESSMENT

Soil condition is still poor, but trend is slightly up due to a decrease in percent bare ground (17% to 9%) and an increase in litter cover (14% to 20%). Trend for black sagebrush is slightly up. Total density has declined a little, but the number of mature plants has doubled while the percentage of decadent plants has decreased substantially. Utilization is more moderate and vigor good on all but a few of the decadent plants. The herbaceous understory is still depleted, yet sum of nested frequency for perennial grasses and forbs has increased.

TREND ASSESSMENT

soil - slightly up but in poor condition (4)

browse - slightly up (4)

herbaceous understory - slightly up but depleted (4)

2001 TREND ASSESSMENT

Soil condition is still poor, trend appears to be slightly down with an increase in percent bare ground (9% to 23%) and a decrease in litter cover (20% to 11%). Overall, the ratio of protective cover to bare soil has decreased substantially since 1996. Trend for black sagebrush is stable. Total density has increased slightly, percent dead within the population has remained the same, and percent decadence has decreased. Utilization is mostly light at this time. The herbaceous understory is still depleted. The sum of nested frequency for perennial grasses has remained stable while frequency of perennial forbs has decreased substantially.

TREND ASSESSMENT

soil - slightly down and in poor condition (2)

browse - stable (3)

herbaceous understory - slightly down and depleted (2)

HERBACEOUS TRENDS --
Herd unit 01 , Study no: 10

T y p e	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'84	'90	'96	'01	'84	'90	'96	'01	'96	'01
G	Bromus tectorum (a)	-	-	53	53	-	-	20	26	.20	.52
G	Oryzopsis hymenoides	2	-	5	-	1	-	4	-	.31	-
G	Poa secunda	_b 10	_a -	_b 22	_b 22	6	-	9	8	.30	.11
G	Sitanion hystrix	_b 73	_{ab} 50	_{bc} 89	_c 97	35	27	42	47	1.02	.86
G	Vulpia octoflora (a)	-	-	-	4	-	-	-	2	-	.01
Total for Annual Grasses		0	0	53	57	0	0	20	28	0.20	0.53
Total for Perennial Grasses		85	50	116	119	42	27	55	55	1.63	0.97
Total for Grasses		85	50	169	176	42	27	75	83	1.83	1.50
F	Allium spp.	8	-	-	-	4	-	-	-	-	-
F	Arabis drummondii	_b 12	_a -	_a -	_a 1	5	-	-	1	-	.01
F	Astragalus beckwithii	_a 7	_a 1	_b 29	_a -	3	1	16	-	.42	-
F	Cruciferae (a)	-	-	_b 11	_a -	-	-	7	-	.03	-
F	Cryptantha spp.	_a -	_a -	_b 20	_a -	-	-	10	-	.05	-
F	Gilia spp. (a)	-	-	_b 9	_a -	-	-	6	-	.03	-
F	Lappula occidentalis (a)	-	-	11	-	-	-	3	-	.04	-
F	Navarretia intertexta (a)	-	-	_b 19	_a -	-	-	9	-	.04	-
F	Phlox hoodii	_a 51	_b 87	_{ab} 61	_a 46	26	36	26	23	.65	.38
F	Phlox longifolia	_{ab} 80	_a 57	_b 94	_{ab} 51	39	26	42	30	.58	.25
F	Townsendia spp.	-	-	3	-	-	-	1	-	.03	-
Total for Annual Forbs		0	0	39	0	0	0	18	0	0.11	0
Total for Perennial Forbs		158	145	218	98	77	63	102	54	1.77	0.64
Total for Forbs		158	145	257	98	77	63	120	54	1.88	0.64

Values with different subscript letters are significantly different at alpha = 0.10 (annuals excluded)

BROWSE TRENDS --

Herd unit 01 , Study no: 10

Type	Species	Strip Frequency		Average Cover %	
		'96	'01	'96	'01
B	Artemisia nova	100	100	24.95	21.25
B	Artemisia tridentata wyomingensis	3	1	.03	-
B	Atriplex confertifolia	18	10	1.43	.22
B	Chrysothamnus viscidiflorus stenophyllus	0	4	5.37	3.79
B	Ephedra nevadensis	76	79	.03	-
B	Grayia spinosa	2	1	.30	-
B	Juniperus osteosperma	3	3	.15	.03
B	Kochia americana	1	1	-	-
B	Opuntia spp.	2	1	.00	-
B	Tetradymia canescens	7	2	-	-
Total for Browse		212	202	32.27	25.30

BASIC COVER --

Herd unit 01 , Study no: 10

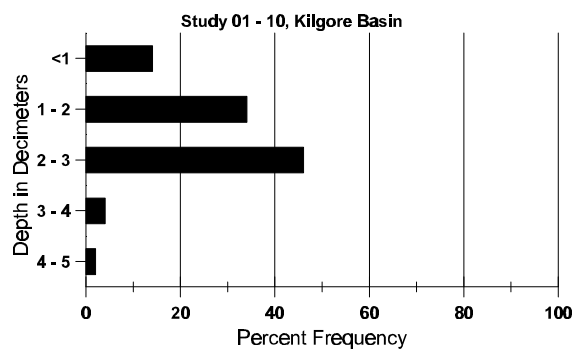
Cover Type	Nested Frequency		Average Cover %			
	'96	'01	'84	'90	'96	'01
Vegetation	296	259	0	5.50	36.16	30.06
Rock	236	211	11.00	6.75	11.82	4.40
Pavement	347	369	40.00	55.25	28.72	36.97
Litter	357	325	21.50	13.75	19.58	11.14
Cryptogams	165	109	1.50	1.50	1.84	.89
Bare Ground	252	309	26.00	17.25	9.20	22.91

SOIL ANALYSIS DATA --

Herd Unit 01, Study no: 10, Kilgore Basin

Effective rooting depth (in)	Temp °F (depth)	PH	%sand	%silt	%clay	%0M	PPM P	PPM K	dS/m
12.4	65.0 (10.8)	8.1	48.9	27.1	24.0	1.2	6.3	444.8	.6

Stoniness Index



PELLET GROUP FREQUENCY --

Herd unit 01 , Study no: 10

Type	Quadrat Frequency	
	'96	'01
Rabbit	2	1
Elk	1	2
Deer	17	13
Cattle	1	2

Pellet Transect	
Pellet Groups per Acre 01	Days Use per Acre (ha) 01
-	-
-	-
270	21 (51)
61	5 (13)

BROWSE CHARACTERISTICS --

Herd unit 01 , Study no: 10

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Artemisia nova																		
S	84	27	-	-	-	-	-	-	-	-	26	-	1	-	1800		27	
	90	14	-	-	-	-	-	-	-	-	14	-	-	-	933		14	
	96	28	-	-	-	-	-	-	-	-	28	-	-	-	560		28	
	01	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
Y	84	15	-	-	-	-	-	-	-	-	15	-	-	-	1000		15	
	90	18	1	4	-	-	-	-	-	-	23	-	-	-	1533		23	
	96	56	15	9	3	-	-	-	-	-	83	-	-	-	1660		83	
	01	77	4	-	-	-	-	-	-	-	81	-	-	-	1620		81	
M	84	-	-	112	-	-	-	-	-	-	86	-	26	-	7466	12 21	112	
	90	10	23	26	-	-	-	-	-	-	51	-	7	1	3933	9 17	59	
	96	106	185	48	6	67	5	-	-	-	417	-	-	-	8340	8 20	417	
	01	399	126	-	8	7	-	-	-	-	510	24	-	6	10800	9 20	540	
D	84	1	-	111	-	-	-	-	-	-	62	-	50	-	7466		112	
	90	55	49	57	-	-	-	-	-	-	98	2	31	30	10733		161	
	96	60	54	8	-	48	10	-	-	-	173	-	-	7	3600		180	
	01	122	25	2	14	14	-	-	-	-	125	-	1	51	3540		177	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	880		44	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	1040		52	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			93%			32%			+ 2%							
'90		30%			36%			28%			-16%							
'96		54%			12%			01%			+15%							
'01		22%			.25%			07%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	15932	Dec:	47%			
												'90	16199		66%			
												'96	13600		26%			
												'01	15960		22%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Artemisia tridentata wyomingensis																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	1	-	-	-	-	-	-	-	-	-	1	-	-	20	19	23	1
	01	1	-	-	-	-	-	-	-	-	-	1	-	-	20	26	45	1
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	2	-	-	1	-	-	-	-	3	-	-	60			3
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	20			1
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			75%			00%			-75%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	0%			
												'90	0		0%			
												'96	80		75%			
												'01	20		0%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Atriplex confertifolia																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
	01	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
Y	84	1	-	-	-	-	-	-	-	-	1	-	-	-	66		1	
	90	2	-	-	-	-	-	-	-	-	2	-	-	-	133		2	
	96	7	-	-	-	-	-	-	-	-	7	-	-	-	140		7	
	01	6	-	-	-	-	-	-	-	-	6	-	-	-	120		6	
M	84	2	3	-	-	-	-	-	-	-	5	-	-	-	333	12 12	5	
	90	6	-	-	-	-	-	-	-	-	5	-	-	1	400	7 10	6	
	96	10	8	3	1	7	-	-	-	-	29	-	-	-	580	10 14	29	
	01	3	-	-	8	-	-	-	-	-	11	-	-	-	220	8 11	11	
D	84	1	11	3	-	-	-	-	-	-	11	-	4	-	1000		15	
	90	11	-	2	-	-	-	-	-	-	9	-	-	4	866		13	
	96	-	-	-	-	1	-	-	-	-	1	-	-	-	20		1	
	01	-	-	-	-	-	-	-	-	1	-	-	-	1	20		1	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	40		2	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	220		11	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		67%			14%			19%			+ 0%							
'90		00%			10%			24%			-47%							
'96		43%			08%			00%			-51%							
'01		00%			06%			06%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	1399	Dec:	71%			
												'90	1399		62%			
												'96	740		3%			
												'01	360		6%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Ceratoides lanata																	
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	01	1	-	-	-	-	-	-	-	-	-	1	-	-	-	20	
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	01	2	-	-	-	-	-	-	-	-	-	2	-	-	-	40	
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
	01	3	-	-	1	-	-	-	-	-	-	4	-	-	-	80	3
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
'84		00%			00%			00%									
'90		00%			00%			00%									
'96		00%			00%			00%									
'01		00%			00%			00%									
Total Plants/Acre (excluding Dead & Seedlings)														'84	0	Dec:	-
														'90	0		-
														'96	0		-
														'01	120		-

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Chrysothamnus viscidiflorus stenophyllus																	
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	96	25	-	-	-	-	-	-	-	-	25	-	-	-	500		25
	01	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1
Y	84	1	-	-	-	-	-	-	-	-	1	-	-	-	66		1
	90	5	5	-	-	-	-	-	-	-	10	-	-	-	666		10
	96	3	-	-	1	-	-	-	-	-	4	-	-	-	80		4
	01	5	-	-	2	-	-	1	-	-	8	-	-	-	160		8
M	84	9	12	3	-	-	-	-	-	-	22	-	2	-	1600	6 7	24
	90	33	5	-	1	-	-	-	-	-	39	-	-	-	2600	7 11	39
	96	208	5	-	11	1	-	-	-	-	225	-	-	-	4500	9 15	225
	01	163	-	-	7	-	-	-	-	-	170	-	-	-	3400	9 14	170
D	84	5	16	2	-	-	-	-	-	-	18	-	5	-	1533		23
	90	2	-	-	-	-	-	-	-	-	2	-	-	-	133		2
	96	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2
	01	19	-	-	3	-	-	3	-	-	20	-	-	5	500		25
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	20		1
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	60		3
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
'84		58%			10%			15%			+ 6%						
'90		20%			00%			00%			+26%						
'96		03%			00%			00%			-12%						
'01		00%			00%			02%									
Total Plants/Acre (excluding Dead & Seedlings)												'84	3199	Dec:	48%		
												'90	3399		4%		
												'96	4620		1%		
												'01	4060		12%		

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Ephedra nevadensis																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	-	2	-	-	-	-	-	-	-	2	-	-	40	9	13	2
	01	1	-	-	-	-	-	-	-	-	-	1	-	-	20	7	15	1
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	1	-	-	-	-	-	1	-	-	20			1
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		33%			67%			00%			-67%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	0%			
												'90	0		0%			
												'96	60		33%			
												'01	20		0%			
Grayia spinosa																		
M	84	-	-	1	-	-	-	-	-	-	-	-	1	-	66	16	4	1
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	2	-	-	-	-	-	-	-	-	2	-	-	40	15	33	2
	01	3	-	-	-	-	-	-	-	-	-	3	-	-	60	11	10	3
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	2	-	-	1	-	-	-	-	-	-	-	3	60			3
	01	-	-	-	1	-	-	-	-	-	-	1	-	-	20			1
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	20			1
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			100%			100%										
'90		00%			00%			00%										
'96		100%			00%			60%			-20%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	66	Dec:	0%			
												'90	0		0%			
												'96	100		60%			
												'01	80		25%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Juniperus osteosperma																		
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	1	-	-	-	-	-	-	-	-	-	1	-	-	20		1	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	01	1	-	-	-	-	-	-	-	-	-	-	1	-	20	-	1	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%			+ 0%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	-			
												'90	0		-			
												'96	20		-			
												'01	20		-			
Kochia americana																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	96	2	-	-	-	-	-	-	-	-	-	2	-	-	40	2	2	
	01	2	-	-	-	-	-	-	-	-	-	2	-	-	40	2	2	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%			+ 0%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	-			
												'90	0		-			
												'96	40		-			
												'01	40		-			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Opuntia spp.																		
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	1	-	-	-	-	-	-	-	-	-	1	-	-	66		1	
	96	2	-	-	-	-	-	-	-	-	-	2	-	-	40		2	
	01	-	-	-	2	-	-	-	-	-	-	2	-	-	40		2	
M	84	1	-	-	-	-	-	-	-	-	-	1	-	-	66	4	4	
	90	1	-	-	-	-	-	-	-	-	-	1	-	-	66	3	4	
	96	4	-	-	-	-	-	-	-	-	-	4	-	-	80	4	8	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	1	-	-	-	-	-	-	-	-	-	1	-	-	20		1	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%			+50%							
'90		00%			00%			00%			+ 6%							
'96		00%			00%			00%			-71%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	66	Dec:	0%			
												'90	132		0%			
												'96	140		14%			
												'01	40		0%			
Sarcobatus vermiculatus																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0	21	38	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%										
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	-			
												'90	0		-			
												'96	0		-			
												'01	0		-			